David Ware
Owens Corning

Measure Information Template

California Building Energy Efficiency Standards
Revisions for July 2003 Adoption

NAIMA Proposed Measure:

Revise prescriptive envelope requirements for nonresidential, high-rise residential, and hotel-motel occupancies

November 5, 2001

Description

Subchapter 5, Section 142 through 146 of the current Standards sets the prescriptive requirements for non-residential, high-rise residential and hotel-motel buildings. This proposal modifies the prescriptive envelope criteria listed in Tables 1-H and 1-I to be consistent with ASHRAE 90.1.

Benefits

Increasing the building envelope R-values saves considerable heating and cooling energy. During last year's AB970 process, the CEC was not able to (due to time and legislation constraints) sufficiently address many energy efficiency measures and/or technologies that can provide significant energy savings. Increasing the efficiency of referenced envelope measures saves both gas and electric peak energy; and do not require maintenance or have servicing needs during the life of the building.

Environmental Impact

The proposal has no potential adverse environmental impacts. Products used to meet the proposed new envelope requirements are already in use and widely accepted.

Type of Change

The proposed change modifies the current prescriptive envelope measures referenced in Table 1-H and Table 1-I. Envelope values would be consistent with ASHRAE 90.1 Tier 1 values. It should be noted that significantly greater savings could be achieved should the CEC incorporate envelope values established through the ASHRAE Tier II analysis.

Measure Availability and Cost

These measures will require no new products or technologies.

Useful Life, Persistence and Maintenance

Measures used to meet this have a proven long useful life, great persistence, and absence of maintenance requirements. Since installation is at the time of construction, the incremental cost of material is very small.

Performance Verification

No new tools or methods are required to ensure or verify performance of the proposed measure. However, modifications to the ACM may be necessary.

Cost Effectiveness

The proposed measures have not recently been evaluated for cost-effectiveness. However, ASHRAE 90.1 is accepted and been subject to balloting of its members, which includes the cost-effective analysis to support its adoption.

Analysis Tools

No new tools are required to quantify energy savings and peak electricity demand reductions – the current reference method is adequate. The applicant may submit data on estimated savings and demand reductions.

Relationship to Other Measures

The proposed measure will have no impact on other mandatory measures or on the approved methods of showing compliance for these building types.

Bibliography and Other Research

ASHRAE 90.1